

SmartSwitch 9000  
9E423-36  
Local Management Appendix

9031943-03

**CABLETRON**  
*SYSTEMS*  
The Complete Networking Solution™



# 9E423-36 Module Specific Information

## Introduction

This appendix contains local management information that is specific to the 9E423-36 Ethernet Switch Module.

The 9E423-36 Ethernet Switch Module is a 37-port switching module with:

- 36 front panel Ethernet ports
- 1 Internal Network Bus (INB) backplane port

Each front-panel port of the 9E423-36 can be configured to operate in the Full Duplex mode. This configuration allows each port to provide a full 20 Mbps of bandwidth.

## Modifying Fields and User Privileges

To modify fields on this module, you must have read-write or super-user privileges. If you have read-only privileges, you can view information; however, you cannot modify any fields. For more information about user privileges and community names, see the *SmartSwitch 9000 Module Local Management User's Guide*.

## Module Interface Codes

The 9E423-36 Ethernet Switch Module has 41 interfaces. Table 1 lists the identifying number, name, and description of each interface.

**Table 1. 9E423-36 Module Interface Codes**

<b>Interface Number</b>	<b>Interface Name</b>	<b>Interface Description</b>
1	SMB1	1 Mbps System Management Bus
2	SMB10	10 Mbps System Management Bus
3	HOST	
4	LOCAL	
5	INB	Internal Network Bus
6	ENET1	Ethernet Front Panel Port 1
7	ENET2	Ethernet Front Panel Port 2
8	ENET3	Ethernet Front Panel Port 3
9	ENET4	Ethernet Front Panel Port 4
10	ENET5	Ethernet Front Panel Port 5
11	ENET6	Ethernet Front Panel Port 6
12	ENET7	Ethernet Front Panel Port 7
13	ENET8	Ethernet Front Panel Port 8
14	ENET9	Ethernet Front Panel Port 9
15	ENET10	Ethernet Front Panel Port 10
16	ENET11	Ethernet Front Panel Port 11
17	ENET12	Ethernet Front Panel Port 12
18	ENET13	Ethernet Front Panel Port 13
19	ENET14	Ethernet Front Panel Port 14
20	ENET15	Ethernet Front Panel Port 15
21	ENET16	Ethernet Front Panel Port 16
22	ENET17	Ethernet Front Panel Port 17
23	ENET18	Ethernet Front Panel Port 18

**Table 1. 9E423-36 Module Interface Codes (Continued)**

<b>Interface Number</b>	<b>Interface Name</b>	<b>Interface Description</b>
24	ENET19	Ethernet Front Panel Port 19
25	ENET20	Ethernet Front Panel Port 20
26	ENET21	Ethernet Front Panel Port 21
27	ENET22	Ethernet Front Panel Port 22
28	ENET23	Ethernet Front Panel Port 23
29	ENET24	Ethernet Front Panel Port 24
30	ENET25	Ethernet Front Panel Port 25
31	ENET26	Ethernet Front Panel Port 26
32	ENET27	Ethernet Front Panel Port 27
33	ENET28	Ethernet Front Panel Port 28
34	ENET29	Ethernet Front Panel Port 29
35	ENET30	Ethernet Front Panel Port 30
36	ENET31	Ethernet Front Panel Port 31
37	ENET32	Ethernet Front Panel Port 32
38	ENET33	Ethernet Front Panel Port 33
39	ENET34	Ethernet Front Panel Port 34
40	ENET35	Ethernet Front Panel Port 35
41	ENET36	Ethernet Front Panel Port 36

Use the numbers listed in Table 1 to configure the module's default interface (see the General Configuration Screen).

## Full Duplex Configuration Screen

The Full Duplex Configuration Screen (Figure 1), displays the port number, operation mode, link status, and port status of the module's 36 ports (12 ports at a time).

SmartSwitch 9000 Local Management			
Full Duplex Configuration			
Module Name: 9E423-36		Firmware Revision: XX.XX.XX	
Slot Number: 12		BOOTPROM Revision: XX.XX.XX	
PORT#	OPERATION MODE	LINK STATUS	PORT STATUS
1	STANDARD ENET	No Link	ENABLED
2	STANDARD ENET	No Link	ENABLED
3	STANDARD ENET	No Link	ENABLED
4	STANDARD ENET	No Link	ENABLED
5	STANDARD ENET	No Link	ENABLED
6	STANDARD ENET	No Link	ENABLED
7	STANDARD ENET	No Link	ENABLED
8	STANDARD ENET	No Link	ENABLED
9	STANDARD ENET	No Link	ENABLED
10	STANDARD ENET	No Link	ENABLED
11	STANDARD ENET	No Link	ENABLED
12	STANDARD ENET	No Link	ENABLED
SAVE	[ 13-24 ]	SET ALL PORTS: FULL	EXIT RETURN

Figure 1. Full Duplex Configuration Screen

## Full Duplex Configuration Screen Fields

The following information briefly explains each Full Duplex Configuration Screen field.

### **OPERATION MODE** (Toggle)

Lets you determine whether the specified port will transmit and receive data separately or simultaneously. You can set this field to one of the following values:

- **STANDARD ENET** - The port can either transmit data or receive data, but not both at the same time. Therefore, the port is running at 10 Mbps (this is the default).
- **FULL DUPLEX** - The port can transmit and receive data at the same time. Therefore, the port is running at 20 Mbps.

### **LINK STATUS** (Read-only)

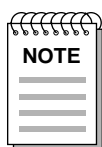
Indicates whether there is a physical connection from this port to another 10Base-T device. One of the following values appears:

- **Link** - There is a 10Base-T link signal present; there is a valid physical connection from this port to another 10Base-T device.
- **No Link** - There is no 10Base-T link signal present; there is no valid physical connection from this port to another 10Base-T device.

### **PORT STATUS** (Read-only)

Indicates whether the port has been turned on or off administratively. You will see one of the following values:

- **ENABLED** - The port is turned on administratively.
- **DISABLED** - The port is turned off administratively.



*Enable or disable ports from the Bridge Configuration screen.*

## Setting One Port to Full Duplex

To set one Ethernet port to Full Duplex (for example, port 1):

1. Use the arrow keys to highlight **STANDARD ENET** in the Operation Mode field (to the right of port 1).
2. Press the **Space Bar** until **FULL DUPLEX** appears in the field.
3. Use the arrow keys to highlight the **SAVE** command on the bottom line of the screen.
4. Press the **Return** key.

## Setting All Ports to Full Duplex

To set all 36 Ethernet ports to Full Duplex:

1. Use the arrow keys to highlight the **SET ALL PORTS** field.
2. Press the **Space Bar** until you see **FULL**.
3. Use the arrow keys to highlight the **SAVE** command on the bottom line of the screen.
4. Press the **Return** key.

## Displaying Information About Other Ports

To display information about other ports:

1. Use the arrow keys to highlight **[1-12]** (for the first 12 ports), **[13-24]** (for the next 12 ports), or **[25-36]** (for the last 12 ports) at the bottom of the Full Duplex Configuration Screen.
2. Press the **Return** key.



## Port Statistics Screen

The Port Statistics Screen (Figure 2), displays information and statistics about the module's 36 Ethernet ports.

```
SmartSwitch 9000 Local Management

                                PORT STATISTICS

Module Name: 9E423-36                Firmware Revision: XX.XX.XX
Slot Number: 12                      BOOTPROM Revision: XX.XX.XX

                                PORT #: 1

OCTETS:          747881
PACKETS:         5079      LINK STATUS:          No Link
TOTAL ERRORS:    0
COLLISIONS:     0        PORT TYPE:             RJ21
CRC/ALIGNMENT ERRORS: 0
UNDERSIZE PACKETS: 0      PORT STATUS:          ENABLED
OVERSIZE PACKETS: 0      APPLICATION:         BRIDGING
FRAGMENTS:      0        OPERATION MODE:     STANDARD ENET
JABBERS:        0
BROADCASTS:    4489
MULTICASTS:    586

PORT #: 1                EXIT                RETURN
```

Figure 2. Port Statistics Screen

## Port Statistics Screen Fields

The following information briefly explains each Port Statistics Screen field.

**PORT #** (Read-only)

Indicates the current port for which statistics are displayed.

**OCTETS** (Read-only)

Displays the number of octets transmitted and received.

**PACKETS** (Read-only)

Displays the number of packets transmitted and received.

**TOTAL ERRORS** (Read-only)

Displays the total number of errors on this port.

**COLLISIONS** (Read-only)

Displays the total number of collisions detected on this port.

**CRC/ALIGNMENT ERRORS** (Read-only)

Displays the number of packets with a bad Cyclic Redundancy Check (CRC) that have been received from the network. The CRC is a 4-byte field in the data packet that ensures that the transmitted data that is received is the same as the data that was originally sent. Alignment errors are due to misaligned packets.

**UNDERSIZE PACKETS** (Read-only)

Displays the number of packets received whose size was less than the minimum Ethernet frame size of 64 bytes, not including preamble.

**OVERSIZE PACKETS** (Read-only)

Displays the number of packets received whose size exceeded 1518 data bytes, not including preamble.

**FRAGMENTS** (Read-only)

Displays the total number of packets received that were not an integral number of octets in length or that had a bad Frame Check Sequence (FCS), and were less than 64 octets in length (excluding framing bits but including FCS octets).

**JABBERS** (Read-only)

Displays the total number of packets received that were longer than 1518 octets (excluding framing bits, but including Frame Check Sequence (FCS) octets), and were not an integral number of octets in length or had a bad Frame Check Sequence.

**BROADCASTS** (Read-only)

Displays the number of broadcasts received.

**MULTICASTS** (Read-only)

Displays the number of multicasts received.

**LINK STATUS** (Read-only)

Displays one of the following values:

- Link
- No Link
- N/A

**PORT TYPE** (Read-only)

Displays one of the following values:

- AUI
- BNC
- EPIM-x
- MMF SMA
- MMF ST
- RJ45
- RJ21
- SMF ST

**PORT STATUS** (Read-only)

Indicates the administrative status of the selected port. Possible values are ENABLED and DISABLED.

**APPLICATION** (Read-only)

Displays BRIDGING, indicating that the port is operating as a bridge with a high-speed backbone connection.

**OPERATION MODE** (Read-only)

Displays one of the following values:

- STANDARD ENET - The port can either transmit data or receive data, but not both at the same time. Therefore, the port is running at 10 Mbps.
- FULL DUPLEX - The port can transmit and receive data at the same time. Therefore, the port is running at 20 Mbps.

**PORT #** (Selectable)

Selects the port for which statistics are to be displayed.

## Displaying Statistics for Another Port

To display statistics for another port:

1. Use the arrow keys to highlight the **PORT #** field at the bottom of the screen.
2. Press the **Space Bar** to increment (or press the **Backspace** key to decrement) the port number.
3. Press the **Return** key (neither the read-only **Port #** field nor the statistics will change until you press the **Return** key).

## Exiting the Port Statistics Screen

To exit the Port Statistics screen, use the arrow keys to highlight **RETURN** and press the **Return** key.

## SmartTrunk Configuration Screen

The SmartTrunk Configuration Screen (Figure 3), allows you to logically group interfaces together between devices to achieve greater bandwidth between the devices.

Access the SmartTrunk Configuration Screen from the Device Specific Configuration Menu Screen by using the arrow keys to highlight the **SmartTrunk Configuration** option and pressing ENTER. The SmartTrunk Configuration screen displays.

SmartSwitch 9000 Local Management					
SmartTrunk Configuration Screen					
Module Name: 9E423-36			Firmware Revision: XX.XX.XX		
Slot Number: 1			BOOTPROM Revision: XX.XX.XX		
Port #	Port Name	Connection	SmartTrunk State	Instance	#STPorts
1	Ethernet	[USER]	NONE	0	0
2	Ethernet	[USER]	NONE	0	0
3	Ethernet	[USER]	NONE	0	0
4	Ethernet	[USER]	NONE	0	0
5	Ethernet	[USER]	NONE	0	0
6	Ethernet	[USER]	NONE	0	0
7	Ethernet	[USER]	NONE	0	0
8	Ethernet	[USER]	NONE	0	0
9	Ethernet	[USER]	NONE	0	0
10	Ethernet	[USER]	NONE	0	0
11	Ethernet	[USER]	NONE	0	0
12	Ethernet	[USER]	NONE	0	0
<b>ENABLE</b>		<b>NEXT</b>		<b>EXIT</b>	
				<b>RETURN</b>	

Figure 3. SmartTrunk Configuration Screen

## SmartTrunk Configuration Screen Fields

The following information briefly explains each SmartTrunk Configuration Screen field.

**Port #** (Read-only)

Identifies the number of the port.

**Port Name** (Read-only)

These are the names assigned by Cabletron Systems for all bridging interfaces.

**Connection** (Toggle)

Enables the connection type for the interface:

- **USER** connections do not participate in SmartTrunking. All FNB, INB1, and INB2 interfaces must be designated as USER connections.
- **NETWORK** is used for load sharing. At least two ports must be designated as NETWORK to do load sharing.

**SmartTrunk State** (Read-only)

Displays the current operating state of the port:

None	The trunk is operating as a normal bridge port.
Blocking	The port is load sharing, but in the blocked mode. While the module performs the function of determining if there is a network loop, data is temporarily blocked on new SmartTrunk ports and any port that becomes newly linked.
SmartTrunking	The port is load sharing with other Network designated ports of the same instance.

**Instance** (Read-only)

Identifies the ports that are grouped together to share traffic load (load sharing).

**# STPorts** (Read-only)

Identifies which ports are grouped (an instance).

## Displaying the SmartTrunk Ports

There are two SmartTrunk screens. Each screen can display up to 12 ports. The **NEXT** and/or **PREVIOUS** command displays at the bottom of the screen, allowing you to navigate to either the next or previous screen.

For example, with two screens of entries, the **NEXT** command displays at the bottom of the first screen. In the second screen, the **PREVIOUS** command displays.

To display the next screen, use the arrow keys to highlight **NEXT**. Press **ENTER** and the next screen of entries displays.

To display the previous screen, use the arrow keys to highlight **PREVIOUS**. Press **ENTER** to view the entries in the previous screen.

## Enabling the Connection

To enable the Connection:

1. Use the arrow keys to highlight the **Connection** field for the selected port(s).
2. Press the **Space Bar** to select **USER** or **NETWORK**.
3. Use the arrow keys to highlight the **ENABLE** command at the bottom of the screen.
4. Press **ENTER**. The message "SAVED OK" displays.

